



## PATENT ABSTRACTS OF JAPAN

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## (54) SUPERCONDUCTING MAGNET EQUIPMENT

## (57) Abstract:

**PROBLEM TO BE SOLVED:** To decrease current density in the inner periphery, and decrease magnetic field, by forming the section of a superconducting coil in a trapezoid wherein the outer peripheral side is longer than the inner peripheral side.

**SOLUTION:** The section of a superconducting coil 1 is formed in a trapezoid wherein the outer peripheral side 5 of the superconducting coil 1 is longer than the inner peripheral side 6 of the coil 1. As to the maximum empirical magnetic field of the innermost periphery, the strength of magnetic field is reduced by about 10%, on account of the trapezoidal form. Character-

istics of the superconducting coil 1 are defined by the maximum empirical magnetic field. As a result, when the maximum empirical magnetic field is reduced, the load factor of a superconducting wire is reduced by that amount, and the margin reaching the quenching is increased. Thereby a stable superconducting coil is obtained, and the quenching phenomenon is made hard to occur.

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